



Attorney Docket No. 249/349

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Jung-hyun LEE, et al.

Art Unit: 2822

Serial No. 10/617,767

Examiner: Christy L. NOVACEK

Filed: July 14, 2003

Confirmation No. 4046

For: DEPOSITION METHOD OF A DIELECTRIC LAYER

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. §1.56**

Commissioner for Patents  
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 (or PTO-1449, *modified*) is a listing of a document(s) known to applicant in order to comply with applicant's duty of disclosure pursuant to 37 C.F.R. §1.56.

☐ A copy of each listed document is being submitted to comply with the provisions of 37 C.F.R. §§1.97 & 1.98. [Box checked if applicable.]

☒ A copy of each listed non-U.S. patent and/or patent publication and cited literature is being submitted to comply with the provisions of 37 C.F.R. §§1.97 & 1.98. Cited U.S. patents and patent publications are *not* attached in accordance with the waiver set forth in the Notice by the Deputy Commissioner for Patent Examination Policy dated July 11, 2003, applicable to applications having a U.S. filing date *after* June 30, 2003. [Box checked if applicable.]

\* \* \*

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application. Applicant does not waive any rights to take any action that would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* prior art reference against the claims of the present application.

10/14/2004 CCHAU1 00000158 10617767

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- ☐ The listed document(s) is/are being submitted in compliance with 37 C.F.R. 1.97(b)(3): submission before the mailing date of the first action on the merits. [Box checked if applicable.]
- ☒ The foregoing document(s) came to applicant's attention during the prosecution of their corresponding European and Korean applications. ☒ A copy of the EP Search Report is also attached. [Box(es) checked if applicable.]

#### CERTIFICATION

- ☒ The undersigned hereby certifies in accordance with 37 CFR §1.97(e)(1) that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this Statement. [Box checked if applicable.]

\* \* \*

Applicant respectfully requests that the listed document(s) be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

\* \* \*

#### FEE PAYMENT

- ☒ The fee mandated by 37 C.F.R. §1.17(p) is believed applicable. [Box checked if applicable.]
- ☒ Attached is Form PTO-2038 payment of this fee (\$180.00). [Box checked if applicable.]
- ☐ This fee may be charged to Deposit Account No. 50-1645. (A duplicate copy of this paper is enclosed.) [Box checked if applicable.]

Respectfully submitted,

October 12, 2004  
Date

  
Eugene M. Lee, Registration No. 32,039

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### DEPOSIT ACCOUNT CHARGE AUTHORIZATION

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the above-paper may also be charged to Deposit Account No. 50-1645.

Substitute for form 1449/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

**(Use as many sheets as necessary)**

**Complete if Known**

Application Number	10/617,767
Filing Date	July 14, 2003
First Named Inventor	Jung-hyun LEE, et al
Art Unit	2822
Examiner Name	C. L. NOVACEK
Attorney Docket Number	249/349

## U. S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> *Number <sup>4</sup> *Kind Code <sup>5</sup> (if known)				
		EP 0 540 994 A1	05-12-1993	ARGOS, et al.		
		EP 1 341 217 A2	09-03-2003	LEE, et al.		
		WO 02/31875 A2/A3	04-18-2002	HAUKKA, et al.		
		JP 2001-267566 *	09-28-2001	MA, et al.		
		*=US 6,407,435				

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.<sup>1</sup> Applicant's unique citation designation number (optional).<sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.<sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).<sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.<sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.<sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		<b>Complete if Known</b>			
		Application Number	10/617,767		
		Filing Date	July 14, 2003		
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		Art Unit	2822		
		Examiner Name	C. L. NOVACEK		
Sheet	2	of	2	Attorney Docket Number	249/349

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		CHOI, et al., *, Jpn. J. of Applied Physics, 40(4B, Part 1):2940-2942, (April 2001)	
		* Entitled: "Electrical Characteristics of Pt/SrBi2Ta2O9/Ta2O5/Si Using Ta2O5 as the Buffer Layer"	
		CLARK-PHELPS, et al. **, Mat. Res. Soc. Symp. Proc. Vol. 670, Society, K2.2.1-6 (2001)	
		** Entitled: "Engineered tantalum aluminate and hafnium aluminate ALD films for ultrathin ... "	
		WILK, et al., ***, Journal of Applied Physics, Vol. 89, No. 10:5243-5275, (May 15, 2001)	
		***Entitled: "High-k gate dielectrics: Current status and materials properties considerations"	

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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